

DOCKET NO. D-2001-028 CP-3

DELAWARE RIVER BASIN COMMISSION

**Fairless Energy, LLC
Electric Generating Facility
Falls Township, Bucks County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) on November 6, 2019 for the renewal of the approval of an electric generating station designed to consumptively use in excess of 100,000 gallons per day of water during any 30-day period (Application).

The Application was reviewed for continued inclusion in the Comprehensive Plan and for approval under Section 3.8 of the *Delaware River Basin Compact*. The Bucks County Planning Commission has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on August 12, 2020.

A. DESCRIPTION

1. **Purpose.** The purpose of this docket is to renew the approval of the existing 1,240-megawatt Fairless Energy Electric Generating Facility and use of up to 356.5 million gallons per month (mgm) of water from US Steel's existing Delaware River Intakes for industrial cooling and processes.
2. **Location.** The Fairless Energy Electric Generating Facility is located in the Keystone Industrial Port Complex in Falls Township, Bucks County, Pennsylvania. Water for the project is supplied by two US Steel intakes located in the Delaware River Water Quality Zone 2 in Falls Township, Bucks County Pennsylvania. The Delaware River near the project site and at the intake location is designated by the Pennsylvania Department of Environmental Protection (PADEP) as supporting warm water fishes, migratory fishes (WWF, MF).

Specific location information has been withheld for security reasons.

3. **Area Served.** Water from the US Steel intakes supplies the Fairless Energy Electric Generating Facility and energy produced by the facility supplies the Pennsylvania-Jersey-Maryland (PJM) grid. For the purpose of defining Area Served, the Application is incorporated herein by reference consistent with conditions contained in the DECISION section of this docket.

4. Design Criteria. The facility is a nominal 1240 MW natural gas fired, combined cycle, electric generation plant. The plant utilizes the existing water supply and wastewater treatment facilities owned and operated by US Steel.

The facility utilizes a closed cycle circulating system equipped with ten-cell wet mechanical draft counterflow fiberglass cooling towers (one tower per unit). The facility also includes a chiller plant with two, four-cell cooling towers and an eight-million gallon thermal energy storage tank. wet mechanical draft counterflow fiberglass cooling towers (one tower per unit). Make up water must be added to the cooling system to replace the portion lost to evaporation and drift and water lost to continuous blowdown and accounts for approximately 90 percent of the facility's total demand. Additional water is also needed in the plant service water system for heat recovery steam generator (HRSG) makeup water, turbine inlet air foggers and other intermittent uses.

The average and maximum cooling and process water demands are 5.5 million gallons per day (mg) and 11.9 mgd, respectively. These design estimates are conservative because they assume full-time operation. The continued allocation of 356.5 mgm of water supply from US Steel is based on the design maximum demands and should be sufficient to continue to meet the facilities demands.

5. Facilities. The electric generating facility includes four combustion turbines, four HRSGs, two steam turbines and two cooling towers. The plant is also equipped with a chiller plant which has two, four-cell cooling towers and an eight-million gallon thermal energy storage tank.

Water from US Steel is metered. Wastewater leaving the facility is also metered.

All water from US Steel is processed through a clarifier with the addition of coagulant, flocculant and coagulant aid for suspended solids removal. Most of this water is directed to the cooling tower for makeup. The rest of the water enters the service water system where it is further treated with sand filters and disinfected with sodium hypochlorite. Service water is used as washdown water and for other low volume uses throughout the plant. The service water system also supplies the raw feedwater for HRSG makeup system. This water is further purified by reverse osmosis and demineralization.

Potable water is supplied by US Steel

6. Other. Sanitary wastewater from the FEGF will continue to be treated at the US Steel wastewater treatment plant (WWTP) located on the US Steel complex in Falls Township, Bucks County, Pennsylvania. Process wastewater from the FEGF will continue to be treated at the US Steel industrial wastewater treatment plant (IWTP) located on the US Steel complex in Falls Township, Bucks County, Pennsylvania. The US Steel WWTP and IWTP were most recently approved by DRBC Docket No. D-1978-068-5 on June 10, 2020. The PADEP issued its most recent NPDES Permit No. PA0013463 on November 20, 2014 for this treatment facility. The treatment facility has adequate capacity to continue to receive wastewater from the proposed project.

7. **Relationship to the Comprehensive Plan.** The project was previously included in the Comprehensive Plan by the Commission in Docket No. D-2001-028 CP-2 on December 8, 2010.

B. FINDINGS

1. Water Supply / Metering

Water used at the energy facility is supplied by US Steel's Delaware River intakes. The withdrawal was most recently approved by DRBC Docket No. D-2009-006-2, the renewal of which is scheduled for the August 12, 2020 hearing agenda. The docket approves a total allocation of 7288.1 mgm of water from Intakes designated as RPS and the C Well Intakes.

2. Consumptive Use

Based on design estimates, consumptive losses are 6.2 mgd (approximately 73 percent of the total water use) on an average monthly basis and 8 mgd (69 percent of the total water use) on a maximum monthly basis. These estimates are conservative because they assume full time operation of the combustion turbines. Based on usage information from 2016, the average daily consumptive use was 3.65 mgd, which was 66 percent of the average water use. In 2016, the maximum monthly consumptive use was 155 million gallons (69 percent of the total water use). Consumptive use is calculated by the difference between metered water supply volume and the metered volume of effluent leaving the facility.

3. Drought Management and Contingency Plan / Consumptive Use Replacement Plan

As required by Docket No. D-2001-028 CP-2, the docket holder submitted an updated Drought Management and Contingency Plan (DMCP) dated October 7, 2019. The DMCP was found to be consistent with the Commission's Consumptive Use Replacement Policy for Power Generators (Resolution No. 2018-5) and was approved by the Commission's Executive Director on November 4, 2019.

In summary, the docket holder has executed a water resources agreement with Eagle Creek Water Resources, LLC for the acquisition of reservoir storage in the Mongaup system and provision of flow augmentation releases to offset consumptive use at the Fairless Hills facility. The water resources agreement includes a 600-million-gallon storage reservation (up to 5 mgd) and an effective term of 15 years (until 2033). The amount of storage was estimated by the docket holder to provide approximately 120 days of makeup water to offset its typical consumptive use.

The docket holder shall implement the CURP upon direction by the Executive Director. (see Condition C.6.)

4. Surface Water Charges

All water used at the Fairless Hills Energy Facility is subject to DRBC water charges. The docket holder shall pay for surface water use in accordance with Administrative Manual – Part III Basin Regulations – Water Supply Charges 18 CFR Part 420 as described in Condition C.2 in the DECISION section.

5. Other Findings

The project is designed to conform to the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

C. DECISION

Effective on the approval date for Docket No. D-2001-028 CP-3 below, the project described in Docket No. D-2001-028 CP-2 is removed from the Comprehensive Plan to the extent that it is not included in Docket No. D-2001-028 CP-3; Docket No. D-2001-028 CP-2 is terminated and replaced by Docket No. D-2001-028 CP-3; and the project and the appurtenant facilities described in in Section A.4. (Design Criteria) and A.5. (Facilities) shall be continued in the Comprehensive Plan. The project and appurtenant facilities as described in in Section A.4. (Design Criteria) and A.5. (Facilities) are approved subject to the following conditions, pursuant to Section 3.8 of the *Compact*:

Monitoring and Reporting

1. The project withdrawals shall be metered by means of an automatic continuous recording device, flow meter, or other method, and shall be measured to within 5 percent of actual flow. An exception to the 5 percent performance standard, but no greater than 10 percent, may be granted for surface water withdrawals by the designated agency (PADEP) if maintenance of the 5 percent performance is not technically feasible or economically practicable. Meters or other methods of measurement shall be subject to approval and inspection by the PADEP as to the type, method, installation, maintenance, calibration, reading and accuracy. A record of daily withdrawals shall be maintained, and monthly totals shall be available at any time to the Commission if requested by the Executive Director.

2. The docket holder shall pay for surface water use in accordance with *Administrative Manual – Part III Basin Regulations – Water Supply Charges 18 CFR Part 420*.

3. The docket holder shall implement to the satisfaction of the Bureau of Watershed Management, PADEP, a continuous program to encourage water conservation in all types of use within the facilities served by this docket approval. The docket holder will report to

the Bureau of Watershed Management, PADEP, on the actions taken pursuant to this program and the impact of those actions as requested by the PADEP.

Other Conditions

4. During any month, the docket holder's water use from the US Steel Intakes shall not exceed 356.5 million gallons per month.

5. The docket holder is responsible for timely submittal to the DRBC of a docket renewal application on the appropriate application form including the appropriate docket application filing fee (see 18 CFR 401.43) at least 6 months in advance of the docket expiration date set forth below. The docket holder will be subject to late filed renewal surcharges in the event of untimely submittal of its renewal application, whether or not DRBC issues a reminder notice in advance of the deadline or the docket holder receives such notice. In the event that a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date below, the terms and conditions of the current docket will remain fully effective and enforceable against the docket holder pending the grant or denial of the application for docket approval.

6. For the duration of a critical hydrologic condition as announced by the Commission, on a daily basis the docket holder shall cause to be released from a replacement water source approved by the Commission an amount of water equal to the amount consumptively used by the docketed facility, multiplied by the applicable relative effect factor, if assigned. For the duration of such critical hydrologic condition, the docket holder shall operate its facility only at a level commensurate with the amount of replacement water it is capable of causing to be released.

7. The facility and operational records shall be available at all times for inspection by the DRBC.

8. The facility shall be operated at all times to comply with the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

9. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

10. The docket holder is permitted to provide the water approved in this docket to the areas included in Section A.3. Area Served of this docket. Any expansion beyond those included in Section A.3. Area Served is subject to DRBC review and approval in accordance with Section 3.8 of the *Compact*.

11. The docket holder shall be subject to applicable DRBC regulatory program fees, in accordance with duly adopted DRBC resolutions and/or regulations. (see 18 CFR 401.43).

12. This approval is transferable by request to the DRBC Executive Director provided that the project purpose and area served approved by the Commission in this docket will

not be materially altered because of the change in project ownership. The request shall be submitted on the appropriate form and be accompanied by the appropriate fee (see 18 CFR 401.35).

13. The docket holder shall request a name change of the entity to which this approval is issued if the name of the entity to which this approval is issued changes its name. The request for name change shall be submitted on the appropriate form and be accompanied by the appropriate fee (see 18 CFR 401.35).

14. The issuance of this docket approval shall not create any private or proprietary rights in the water of the Basin, and the Commission reserves the rights to amend, alter or rescind any actions taken hereunder in order to insure the proper control, use and management of the water resources of the Basin.

15. If the monitoring required herein or any other relevant data or information demonstrates that the operation of this project is interfering with or otherwise impairing existing uses of ground or surface water, or if the docket holder receives a complaint from an existing ground or surface water user within the zone of influence of the withdrawal alleging such interference or impairment, the permit holder shall immediately notify the Executive Director, and unless excused by the Executive Director, shall investigate the demonstrated or alleged impacts. For purposes of this condition, notification shall mean either (a) electronic transmittal of written notice to the Executive Director via email (using addresses posted on the DRBC website); or (b) written notice to the Executive Director and a telephone call to the Project Review Section at 609-883-9500, ext. 216. (Oral notification must always be accompanied by immediate written notification directed to the Executive Director.) In addition, the docket holder shall provide written notice to all potentially affected water users of the docket holder's responsibilities under this condition. **Any well or surface water supply that is impaired as a result of the docket holder's project withdrawal shall be repaired, replaced or mitigated at the docket holder's expense.** The scope of the options to consider for repair, replacement and/or mitigation shall not be limited solely to those that are owned, operated, or controlled by the project sponsor. An investigation report and/or mitigation plan prepared and certified by a licensed professional engineer and/or a licensed professional geologist shall be submitted to the Executive Director as soon as practicable following notice of the demonstrated or alleged impairment consistent with this paragraph. The Executive Director shall make the final determination regarding the scope and sufficiency of the investigation and the extent of any mitigation measures that may be required. Where ground and surface waters are rendered unavailable, unusable, or unsuitable for the pre-existing use, the Executive Director may direct the docket holder to take interim actions to mitigate such impacts, pending completion of the investigative report and any long-term repair, replacement or mitigation.

16. The Executive Director may modify or suspend this approval or any condition thereof, or require mitigating measures pending additional review, if in the Executive Director's judgment such modification or suspension is required to protect the water resources of the Basin.

17. For the duration of any drought emergency declared by either Pennsylvania or the Commission, water service or use by the docket holder pursuant to this approval shall be subject to the prohibition of those nonessential uses specified by the Governor of Pennsylvania,

the Pennsylvania Emergency Management Council, PADEP, or the Commonwealth Drought Coordinator to the extent that they may be applicable, and to any other emergency resolutions or orders adopted hereafter by the Commission.

18. Any person who objects to a docket decision by the Commission may request a hearing in accordance with Article 6 of the *Rules of Practice and Procedure*. In accordance with Section 15.1(p) of the *Delaware River Basin Compact*, cases and controversies arising under the *Compact* are reviewable in the United States district courts.

BY THE COMMISSION

APPROVAL DATE: September 10, 2020

EXPIRATION DATE: December 8, 2030